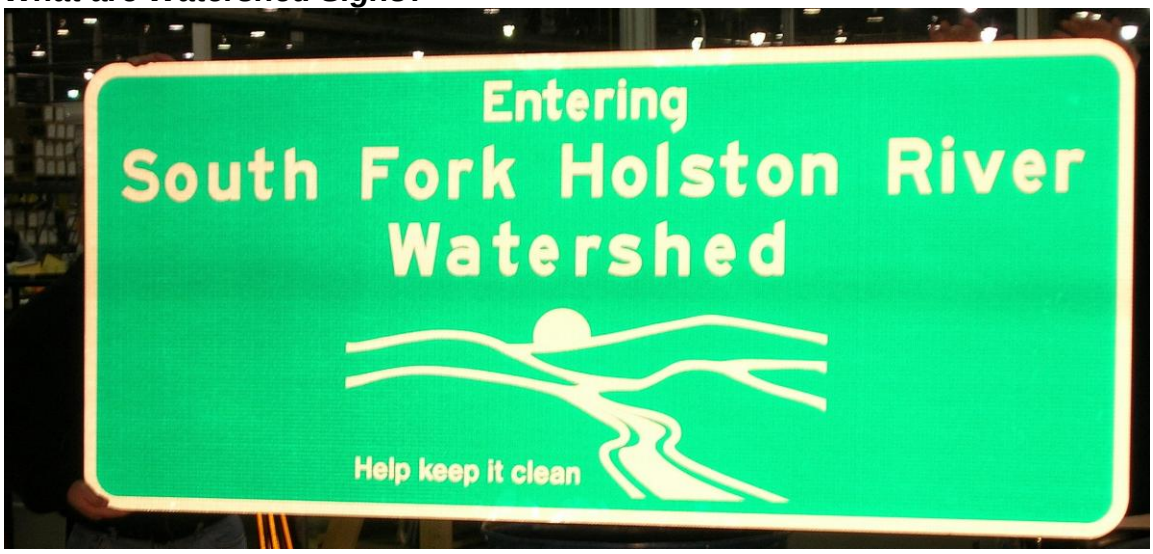
FAQs about TDOT-TDOT Watershed Sign Project

More information about Watershed Signs and a variety of online water resources are available at www.tn.gov/environment/watershedsigns.

What are Watershed Signs?



Placing watershed signs along Tennessee roadways is a joint project supported by the Tennessee Department of Transportation and the Tennessee Department of Environment and Conservation. These signs increase public awareness regarding the importance of watersheds and encourage good stewardship of the state's valuable rivers, streams, wetlands, lakes, and ground water.

This educational effort is intended to help individuals become more aware and interested in watersheds by increasing recognition of watersheds and also discouraging pollution of Tennessee's streams and rivers.

How many signs will each watershed get?

TDOT has worked cooperatively with TDEC to establish a watershed signing program that will place 77 Interstate (or freeway) signs and 110 state route signs at entry points to the 55 watersheds throughout the state, for total of 187 signs.

Each watershed may have between one (1) and seven (7) signs based on the geographic location and how many major highways enter the watershed. Most watersheds will have about four (4) signs each.

When were the signs installed?

TDOT contractor began installation in late February and installed all watershed signs by March 1, 2008.

How much did each sign cost?

The larger interstate size sign averaged about $3,500 each with the smaller state route sign averaging about $237 each. Actual cost of each sign varies based on the overall size, which is dependent on the amount of text shown.

What is the expected total cost for the complete project?

Total contract cost for watershed sign installations is $280,194.85.

Who is paying for the signs?

TDOT and TDEC are partnering to fund this program.

Where does the money come from?

TDOT's funding is coming from our MS4 program as part of education and outreach efforts. Municipal Separate Storm Sewer System (MS4) programs are required by the U.S. Environmental Protection Agency (EPA) and TDEC to reduce pollution from storm water to surface waters and groundwater.

Municipalities with populations of 50,000 or greater and some smaller designated cities along with other public entities with significant storm water drainage systems such as universities, counties or state transportation departments have been selected to have MS4 programs. TDOT is one of these designated MS4 programs. Funds from TDOT's MS4 program can only be used for education purposes.

As part of TDOT's National Pollution Discharge Elimination System (NPDES) Permit, the department was required to develop and implement a Storm Water Pollution Prevention Program (SWPPP) to reduce the discharge of pollutants from our storm sewer system to the maximum extent practicable.

The SWPPP covers six minimum control measures:

- Public education and outreach;
- Public participation/involvement;
- Illicit discharge detection and elimination;
- Construction site runoff control;
- Post-construction site runoff control; and
- Pollution prevention/good housekeeping.

As part of public education and outreach on storm water impacts, TDOT is developing an education program to reach three major audiences, (1) the public, (2) TDOT contractors, and (3) TDOT employees. The program is intended to leverage existing programs within the department to develop, implement, and maintain a public education program designed to educate the public about the

impacts of highway storm water discharges on adjacent streams and lakes and the steps that the public can take to reduce pollutants in storm water runoff. Where possible, TDOT plans to participate and coordinate with other MS4s.

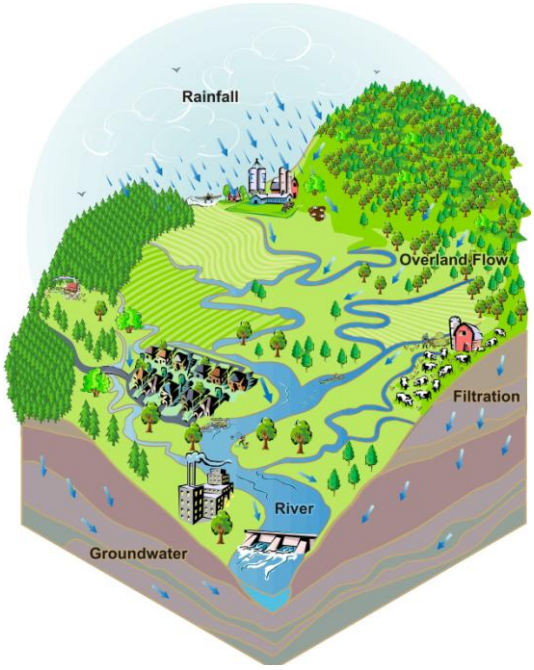
The purpose of the signs is to increase awareness and recognize the importance of watersheds and encourage good stewardship of the state's valuable rivers, streams, wetlands, lakes, and ground water.

TDEC's financial contribution to this project comes from funds directed through a Supplemental Environmental Project (SEP). A SEP is created when TDEC takes enforcement action against a regulated entity for environmental violations, and that entity pays part or all of an imposed civil penalty through an mutually agreed upon environmental project.

About Watersheds in Tennessee

What Is a Watershed?

Watersheds are a logical way to think about the connection between the land and the quality of water we enjoy. How we manage and treat the land has a direct impact on the ability of water to support a number of important public uses like swimming, fishing, aquatic species habitat and drinking water supply. We all live downstream from someone, and what happens in a watershed does not just stay in that watershed.



Water from rainfall that doesn't evaporate runs into ditches, streams, creeks, rivers, wetlands or lakes. A watershed is the land area from which water drains into a river, stream or lake.

Suppose you're hiking in the woods on a hot summer day, and you set up camp beside a dry creek bed. During the night, it starts to rain, and in the morning, the creek is full of water - dripping from tree branches, forming rivulets along the ground, carrying mud and leaves down the trail you hiked in on.

If you could rope off every bit of ground that is "shedding" water into this creek, you would have outlined its watershed. A watershed is all the land area that drains into a given body of water, from the very small such as your creek in the woods, to the very large, such as the Mississippi River.

Small watersheds combine to become big watersheds, sometimes called basins. When water from a few acres drains into a little stream, those few acres are its watershed. That stream flows into a larger stream, and that larger stream flows into a bigger river, then the initial small watershed is now part of that river's watershed. Nearly all of the water that flows over Tennessee eventually drains into the Mississippi River. And the mighty Mississippi itself continues south to Gulf of Mexico.

How Does Tennessee Manage Protection Programs by Watershed?

Think back to that creek in the woods. Think about the mud washing into the creek from the hiking trail—and then consider that there may have been chemical fertilizers in that mud, or motor oil from the parking lot where you left your car. Unless these contaminants sink into the ground or get absorbed or filtered, they wind up accumulating as pollutants in Tennessee streams.

This is why Tennessee's water-quality program focuses on watersheds—it's the best way to inventory, assess, and report on the quality of all the waters in the state.

Where pollutants threaten or prevent our waters from meeting goals, we can look at all of the sources in the watershed and develop control strategies. Many water-quality problems, such as the accumulation of silt or fertilizer, are best addressed at the watershed-level, often by working with local stakeholders, such as hikers, farmers, landowners, and interested citizens. There are several very effective watershed associations already in Tennessee and citizens are encouraged to form even more local watershed groups and to become actively involved in protecting waters in their neighborhood.

Tennessee recognizes 55 watersheds, and TDEC has developed a watershed management plan for each of them. These plans are available online at www.tn.gov/environment/watersheds. The U.S. Environmental Protection Agency also offers Surf Your Watershed as a service to help citizens locate, use and share environmental information about their watershed. See www.epa.gov/surf

Everyone is encouraged to see the most recent Watershed Water Quality Management Plans at www.tn.gov/environment/wpc/watersheds. The Tennessee Department of Environment and Conservation also makes it easy for citizens to learn about, and participate in, discussions about their watershed of interest. As part of its five-year watershed management planning process, TDEC holds meetings in the watershed to hear from the people who live there and to share the latest information from the water specialists at the department.

What tools do we have to protect our Watersheds?

TDEC has an extensive program for monitoring and assessing the quality of waters in each of the 55 watersheds across the state. The department regularly reports the results of those assessments and that information serves to inform our regulatory programs regarding needed controls on discharges and other impacts.

Most of Tennessee's municipalities and many of its industries discharge treated wastewater to streams. Many land disturbing activities such as construction involve altering water courses or wetlands. All of these activities are regulated under a permit program in Tennessee to make sure waters are protected.

Storm water originates from rainfall. Rainwater that does not soak into the ground becomes surface runoff, either flowing directly into streams or being channeled into surface conduits, called storm sewers, and eventually discharges to streams. Contaminants from areas such as roofs, parking lots, construction sites and farms can be transported by storm water. Because most storm water is not treated prior to entering streams, it's crucial that we prevent pollution at the source.

In urbanized areas, storm water runoff is transported through Municipal Separate Storm Sewer Systems (MS4s). There are more than 100 designated MS4s in Tennessee, usually managed by city or county government, with conduits ranging from curbs to ditches to storm drains. The goal of storm water management is to prevent pollutants from reaching waterways as a result of rain events. TDOT has one of the largest designated MS4 programs in Tennessee; it handles storm water from miles of interstate roads, highways and maintenance facilities. More information at **www.tnstormwater.org**